REMARKS

Claims 1-11 and 18 are currently pending, wherein Applicant proposes to amend claim 1, and cancel withdrawn claims 12-17. Applicant respectfully requests entry of the above-identified amendments and reconsideration in view of the remarks presented herein below.

At the outset, Applicant notes with appreciation the allowance of claim 18 and the indication that claim 10 contains allowable subject matter. In addition, Applicant notes that the claim amendments identified-above have been proposed in an attempt to expedite prosecution of the present application by placing the application in condition for allowance. More specifically, Applicant proposes to cancel withdrawn claims 12-17, and amend claim 1 to even more clearly define the present invention.

In paragraph 2 of the final Office action ("Action"), the Examiner objects to claims 2-5 under 37 CFR 1.75(c) for allegedly failing to further limit the subject matter of a previous claim. Applicant respectfully traverses this objection.

In objecting to claim 2-5, the Examiner asserts that claim 2-5 recite "said first diameter is in said first section" which is broader than the limitation "a first diameter at a position where a first of said plurality of insulating layers contacts said plurality of first electrodes" as recited in claim 1. The Examiner's assertion is unfounded.

Although the Examiner is correct that claims 2-5 recite the first diameter is in the first section, claims 2-5 further recite "first section corresponding to a lowermost insulting layer of said plurality of insulating layers being in contact with said plurality of first electrodes." Therefore, the first section of claims 2-5 is equivalent to the position

recited in claim 1. Accordingly, claims 2-5 are proper dependent claims in as much as they further limit their base claim by defining that the at least one hole has a first, second, and third section. In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the objection to claims 2-5 under 37 CFR 1.75(c).

In paragraph 2 of the Action, the Examiner objects to claims 12-17 because the status identifiers should be updated. Applicant proposes to cancel claims 12-17 rendering this objection moot.

In paragraph 5 of the Action, the Examiner rejects claims 1, 2, 5-9, and 11 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. 2002/0036452 A to Muroyama et al. ("Muroyama") in view of U.S. Patent No. 7,012,362 to Kawate et al. ("Kawate"). Applicant respectfully traverses this rejection.

In order to support a rejection under 35 U.S.C. §103(a), the Examiner must establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness three criteria must be met. First, there must be some motivation to combine the cited references. Second, there must be a reasonable expectation of success. Finally, the combination must teach each and every claimed element. In the present case, claims 1, 2, 5-9, and 11 are not rendered unpatentable by the combination of Muroyama and Kawate for at least the reason that the combination fails to disclose each and every claimed element as discussed below.

Independent claim 1 defines a cold cathode light emitting device emitting light by electrons extracted from a cold cathode. The device includes, *inter alia*, a plurality of

cathode electrodes, a plurality of insulating layers laminated over said plurality of cathode electrodes, a plurality of gate electrodes provided on said plurality of insulating layers to intersect said plurality of cathode electrodes with said plurality of insulating layers interposed there between, for extracting electrons from said plurality of cathode electrodes, an anode electrode opposed to said plurality of gate electrodes for emitting light upon receipt of said electrons, with a voltage for accelerating said electrons being applied between said anode electrode and said plurality of cathode electrodes, wherein at least one hole provided at each intersection of said plurality of cathode electrodes and said plurality of gate electrodes extending through said plurality of gate electrodes and said plurality of insulating layers to reach a surface of said plurality of cathode electrodes, said at least one hole having a first diameter (d1) at a position where a first of said plurality of insulating layers contacts said plurality of cathode electrodes and a second diameter (d2) at position where a second of said plurality of insulating layers contacts said plurality of gate electrodes, where d2 is greater than d1, and a nanofiber-structure layer provided on said plurality of first electrodes in an opening portion corresponding to said first diameter d1 in said at least one hole.

Muroyama discloses a cold cathode field emission device that comprises a cathode electrode formed on a supporting substrate; a gate electrode formed above the cathode and having an open portion; and an electron emitting portion composed of a carbon film formed on a surface of a portion of the cathode electrode. However, nowhere in Muroyama is any disclosure or suggestion of a plurality of insulating layers interposed between the cathode electrode and the gate electrode as claimed. To the

contrary, as illustrated, for example, in Fig. 16 of Muroyama, Muroyama only discloses a single insulating layer interposed between the cathode electrode and the gate electrode.

Kawate discloses an electron-emitting device the includes a cathode electrode and an gate electrode which are formed in opposition of each other, as illustrated, for example, in Fig. 1B of Kawate. Accordingly, Kawate fails to overcome the deficiencies of Muroyama.

Since Muroyama and Kawate both fail to disclose or suggest a cold cathode light emitting device that includes a plurality of insulating layers interposed between a cathode electrode and gate electrode as claimed, the combination of these two references cannot possibly disclose or suggest said element. Therefore, even if one skilled in the art were motivated to combine Muroyama and Kawate, which Applicant does not concede, the combination would still fail to render claim 1 unpatentable.

Further, in this rejection, the Examiner cited the electrode 18 of Muroyama as corresponding to the claimed second electrode. However, claim 1 has been amended to replace the claimed "second electrodes" with --gate electrodes--. The electrode 18 in Muroyama is not a gate electrode, but, rather, is a focus electrode (see Muroyama at paragraph [0356]). In Muroyama, the gate electrode is electrode 13, not electrode 18. Thus, for this additional reason, the combination of Muroyama and Kawate fails to render claim 1 unpatentable.

For at least those reasons presented above, Applicant respectfully submits that independent claim 1 is allowable over the combination of Muroyama and Kawate. Accordingly, claims 2, 5-9, and 11 are allowable over this combination at least by virtue

of their dependency on claim 1. In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1, 2, 5-9 and 11 under 35 U.S.C. §103(a) in view of the combination of Muroyama and Kawate.

In paragraph 6 of the Action, the Examiner rejects claims 1-3, 5-9, and 11 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,075,315 to Seko et al. ("Seko") in view of U.S. Patent No. 5,929,560 to Trujillo et al. ("Trujillo") and U.S. Patent No. 7,012,362 to Kawate et al. ("Kawate") Applicant respectfully traverses this rejection.

As discussed above, in order to support a rejection under 35 U.S.C. §103 the combination must teach each and every claimed element. In the present case, claims 1-3, 5-9, and 11 are not rendered unpatentable by the combination of Seko, Trujillo, and Kawate for at least the reason that the combination fails to disclose each and every claimed element as discussed below.

Seko discloses a field-emission cold cathode device having improved insulating characteristics and a method of manufacturing the device. However, nowhere in Seko is there any disclosure or suggestion of a plurality of insulating layers interposed between the cathode electrode and a gate electrode as claimed.

Trujillo discloses a field emission display including a dielectric layer having a plurality of emitter wells. Kawate discloses an electron-emitting device the includes a cathode electrode and an gate electrode which are formed in opposition of each other, as illustrated, for example, in Fig. 1B of Kawate. However, neither Trujillo nor Kawate overcome the deficiencies of Seko.

Since Seko, Trujillo, and Kawate each fail to disclose or suggest a cold cathode light emitting device that includes a plurality of insulating layers interposed between a cathode electrode and gate electrode as claimed, the combination of these three references cannot possibly disclose or suggest said element. Therefore, even if one skilled in the art were motivated to combine Seko, Trujillo, and Kawate, which Applicant does not concede, the combination would still fail to render claim 1 unpatentable.

Further, in this rejection, the Examiner cited the electrode 89 of Seko as corresponding to the claimed second electrode. However, as discussed above, claim 1 has been amended to replace the claimed "second electrodes" with --gate electrodes--. The electrode 89 in Seko is not a gate electrode, but, rather, is a control electrode (see Seko at column 10, lines 11-14). In Seko, the gate electrode is electrode 4, not electrode 89. For this additional reason, the combination of Seko, Trujillo, and Kawate fails to render claim 1 unpatentable.

For at least those reasons presented above, Applicant respectfully submits that independent claim 1 is allowable over Seko, Trujillo, and Kawate. Accordingly, claims 2, 3, 5-9, and 11 are allowable over this combination at least by virtue of their dependency on claim 1. In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-3, 5-9 and 11 under 35 U.S.C. §103(a) in view of the combination of Seko, Trujillo, and Kawate.

In paragraph 7 of the Action, the Examiner rejects claims 1, 4, 6-9, and 11 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 7,101,243 to

Amey, Jr. ("Amey") in view of U.S. Patent No. 6,211,608 to Raina et al. ("Raina"). Applicant respectfully traverses this rejection.

As discussed above, in order to support a rejection under 35 U.S.C. §103 the combination must teach each and every claimed element. In the present case, claims 1, 4, 6-9, and 11 are not rendered unpatentable by the combination of Amey and Raina for at least the reason that the combination fails to disclose each and every claimed element as discussed below.

Amey discloses a multilayer cathode backplate structure for use with a field emitter in display panels. Raina discloses a field emission device having a buffer layer positioned between and underlying cathode conductive layer and an overlying resistor layer. However, neither of these two references discloses or suggests a cold cathode light emitting device that includes a plurality of insulating layers interposed between a cathode electrode and gate electrode as claimed.

Since Amey and Raina both fail to disclose or suggest a cold cathode light emitting device that includes a plurality of insulating layers interposed between a cathode electrode and gate electrode as claimed, the combination of these two references cannot possibly disclose or suggest said element. Therefore, even if one skilled in the art were motivated to combine Amey and Raina, which Applicant does not concede, the combination would still fail to render claim 1 unpatentable.

Further, in this rejection, the Examiner cited the electrode 17 of Amey as corresponding to the claimed second electrode. However, as mentioned above, claim 1 has been amended to replace the claimed "second electrodes" with --gate electrodes--.

The electrode 17 in Amey is not a gate electrode, but, rather, is an additional control or focus electrode (see Amey at column 6, lines 4-6). Amey does not specifically disclose a gate electrode. Electrode 14 in Amey is also described as a control electrode (see Amey at column 5, lines 63-64). For this additional reason, the combination of Amey and Raina fails to render claim 1 unpatentable.

For at least those reasons presented above, Applicant respectfully submits that independent claim 1 is allowable over the combination of Amey and Raina. Accordingly, claims 4, 6-9, and 11 are allowable over this combination at least by virtue of their dependency on claim 1. As such, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1, 4, 6-9, and 11 under 35 U.S.C. §103(a) in view of the combination of Amey and Raina.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Jason Rhodes (Reg. No. 47,305) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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